A

Dissertation, Passed March 15th 1825
on

Bilious Remittent Fever,
by

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of

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This form of disease is peculiarly interesting to the southern practitioner. Its annual depredations and the utter defiance at which it frequently places all the resources of his art, render a minute acquaintance with its phenomena, and rational principles for its treatment, points of knowledge essentially necessary to him.
As distinguished from the intermittent, it may be defined a fever made up of paroxysms between which there is no entire apyrexia, though there is some degree of remission and exacerbation daily.
The systematic writers have usually divided its causes into the predisponent and exciting, and among the former of these may be noticed the Marsh Miasmata. That Intermittent & Remittent Fevers have a common origin in this cause though in different degrees of it appears to be the received opinion. In temperate seasons and in those

climates where the greatest heats do not prevail, and where the nature of the soil is unfavorable to the abundant extrication of Miasmata, Intermittents are the most frequent form of fever. But in those which are alternately scorched by fierce heats and drenched with heavy rains, where Miasmata exist in an extremely concentrated state, we are presented with Remittent fevers of various types and various degrees of malignancy. Although Miasmata are probably the most frequent source of this fever, yet it is often dependent on other causes. It is thought by some writers that the influence of great atmospheric heat alone is capable of producing it. Against this opinion we have the authority of Fordyce; and in support of his assertion he appeals to the fact, that the countries which lie to the north of the Cape of Good Hope which are among the hottest on earth, yet being also

very dry fevers are not remarkably prevalent. And likewise that certain classes of artisans who work in rooms heated to upwards of 150° Far. are by no means peculiarly subject to Fevers. Later and more extended observations however shew, that the most malignant forms of fever are endemic in many tropical countries, where no other adequate cause for their production could be assigned, than excessive atmospheric heat.

From the circumstance that they frequently prevail over extensive tracts of country, not confined to low grounds or marshy situations, but often avoiding these and clinging to those of opposite character, they have also been ascribed to epidemic influence. On this point however our knowledge is as yet limited, the peculiar nature of this influence or its dependence on the seasons has not been ascertained, and the most that is left us is but conjecture. There are a variety

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of other causes which are thought by Cullen, to act in most instances by coinciding with the operation of miasmata. Among these may be mentioned excessive fatigue from great mental or bodily exertion, the depressing passions, excessive evacuations, late watching, and probably whatever debilitates the system generally. An attack of this fever is usually induced, by some indiscretion in diet or in the use of ardent spirits, sleeping in an exposed situation, getting wet from a shower of rain, not to mention a variety of other causes.

This is a disease of such various aspect from its important diversifications by climate local origin and idiosyncrasy, that it would be difficult to give a character of it which would universally apply. But as it ordinarily presents itself, it commences with most of the

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phenomena of Intermittent fever. There is a disposition to yawn & stretch, with a sensation of weariness in the limbs, pain in the back or loins, and usually some affection of the stomach with nausea or vomiting of bilious matter. At times there are well defined chills with violent rigors, more commonly there is a mere sensation of chilliness with alternate flushes. After these have continued an indefinite period, fever is established, marked by increased force and frequency of the pulse, determination to the head, the skin dry & hot, much thirst, a diminution or entire suspension of the secretions, the tongue dry and loaded with a yellow or dark brown fur, the urine is high colored and in diminished quantity. The bowels are for the most part Costive, and when there are discharges, they shew excess or diminution of the biliary secretion. As the

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Fever advances, the determination to the head is increased inducing various degrees of cerebral affection, the skin and eyes become of a yellowish hue, the nausea and vomiting is increased with heat or pain in the Epigastric region. In the progress of the fever during the course of twenty four hours, other phenomena present themselves. There are a remission of all the symptoms, which takes place in the morning attended with slight perspiration, which however gives but little relief, the fever gradually rises and the exacerbation is at its heighth towards the evening. The remissions and exacerbations do not always occur at regular periods, They observe more regularity the nearer the fever approaches the Intermittent form. In violent cases where it has more the type of continued fever, they occur at irregular intervals, frequently several in the course of the day.

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The terminations of this fever are either into Typhus, Intermittent, or Febricula or it may admit of solution by our remedies, and where the attack is not violent, by the efforts of the natural powers alone.

The most inexperienced practitioner will in general be able to form a correct Diagnosis, by attending to the predominance of bilious symptoms in the disease, the season of the year and the local position.

In our Prognosis it is necessary to take into consideration, certain periods in fevers which were much insisted on by the older Physicians, and which indeed have obtained the sanction of many of the most eminent modern authorities The critical days of Hippocrates, so called from his giving an accurate description of them, are the third, fifth, seventh, ninth, eleventh, fourteenth, seventeeth and twentieth. Each

critical day may serve as an indication to the one following it. Thus if a patient finds himself better on a critical day, we may look for a still more favorable change on the critical day succeeding, and if on the contrary he finds himself worse on such a day, his situation will be still more unfavorable on the one which follows it. Again "if on the critical days the violence of the symptoms be much increased, we dread a fatal termination, and we judge this nearer or more distant according to the degree of exacerbation."
The circumstances denoting a favorable termination are, the pulse becoming softer, slower, less irritated, and more natural, the skin assuming a perspirable and relaxed condition, determination to the head lessened, the irritability of the stomach quieted, the liver resuming its natural secretions, the urine depositing a lateritious sediment,

and the mental functions becoming less disturbed.

The unfavorable symptoms are involuntary twitchings or startings, that are frequently the harbingers of general Convulsions, in which the patient expires. Much increase of the cerebral affection as manifested by Coma or Delirium; the stomach extremely irritable with great tenderness of the Epigastrium, preternaturally thin and watery stools without odor or extremely offensive with a total absence of bile in them, an irregular distribution of temperature as cold wrists and hot hands or palms, are symptoms indicative of the almost certain approach of death. As this Fever frequently puts on a typhoid type, our Prognosis in such cases would be determined by the same circumstances, which would influence us in a case of genuine Typhus.

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are various. If the inflammatory symptoms have run high during the disease, we may expect to find inflammation or the consequences of it, in the mucous coat of the stomach and Duodenum. The brain, liver and spleen are generally more or less deranged, most frequently by congestions in them, and the Gall Bladder is usually turgide with a viscid or dark colored bile.

In the treatment of this disease, the first remedy that claims our attention is Bloodletting. The mists of prejudice which for a while obscured its value, have now passed away or they only exist in the fears of the vulgar. The extent to which it is to be carried must be left to the judgement of the practitioner, though the circumstances demanding its use are readily made out. Where the patient is restless, with a dry and hot skin, an active and corded pulse, with much

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determination to any particular organ, the propriety of the measure is sufficiently manifest. Much discrepancy of opinion exists, with regards to the use of the lancet in the Remittents of sultry climates. From the circumstance of their running their course so rapidly, and the symptoms of extreme debility which they so readily put on, many have been deterred from its use altogether or have only used it under the strictest limitations. But it should be recollected, that the violent excitement which exists in the commencement of these fevers, is of itself a highly debilitating cause, and enfeebles the patient much more than a well timed bloodletting, which is our most efficient agent in the reduction of this excitement.
According to some writers, during the exacerbation and when it is at its heighth, is the best time to resort to this evacuation.

Under these circumstances it is better borne by the patient, and much more permanent and effectual relief is obtained from it during the following day. If we bleed during the remission says Dr Johnson, when the system is as it were in a state of collapse, Deliquium Animi followed by a train of nervous symptoms are often the consequence. In aid of venesection, topical bleeding by cups or leeches may be resorted to with much advantage. The detraction of blood immediately from the part affected, has a much more prompt and decided effect in relieving congestions or inflammations, and it may also be exceedingly useful where the apprehensions of debility deter us from general bloodletting.

Evacuations from the stomach and bowels, is likewise an indication of primary import-ance. In many instances it would be

necessary to determine, whether they should precede or follow venesection. In the early stages when fever is not completely established, we may by the exhibition of Emetic or Purgative medicines, frequently put an end at once to the disease. At a later period however when the sanguiferous system is involved, venesection should be premisedy. Evacuations from the stomach and bowels are demanded, when to the circumstances which determine the necessity of bloodletting, are added a loaded tongue and constipated bowels. Emetics are given when it is at yet an early stage of the fever. Their effects we are taught, are not limited to the mere evacuation of the contents of the stomach. They break the morbid associations which exist in fevers, restore the secretions and produce an equable distribution of blood throughout the system. If after their employment

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the stomach is still nauseated and the tongue loaded, a repetition of them is demanded. When there are no circumstances which indicate a farther use of emetics, we may resort to the Purgative medicines. Some discrimination in our employment of them is necessary. If excitement should be great, we exhibit those articles best calculated to reduce this excitement, and of these Calomel in combination with one or more of the drastic Cathartics, appears to have most evidence in its favor. The remission should be selected as the time for administering the medicine. If given during the exacerbation, it is apt to be rejected by vomiting or it lies on the stomach without operating, producing extreme distress to the patient. To aid the operation of these articles, enemata may be employed with much advantage, and the mildest of them here answer best. In the exhibition of purgatives a circumstance

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pointed out to us by Dr Chapman, should not be overlooked. It frequently happens that though copious watery & facal discharges are induced, the fever does not abate, the head is still affected, the stomach nauseated, and the tongue loaded. The natural faces pass over the thick tenacious coat formed by the vitiated secretions of the stomach, the removal of which is essential to the restoration of healthy action in the mucous coat. To obtain this end small doses of calomel are given, until about twenty grains are accumulated in the stomach, to be carried off by castor oil or some one of the neutral salts. By this process dark tarry & fatid discharges are brought away, which are sure evidences that a right impression has been made upon the stomach. Having thus thoroughly evacuated the stomach and alimentary canal, to diminish excitement by the copious secretions they induce, and to

keep the bowells in a soluble condition, some one of the neutral salts with a small proportion of cremetic Tartar, are to be administered in divided doses. For allaying morbid heat, and in some measure arresting the febrile course, much attention has been paid by modern Physicians to cold bathing. The circumstances which should influence us in the employment of it are, when the heat is steadily above the natural standard, the pulse active, and the skin dry or with only partial sweats. Of the several modes in which the cold bath is given, sponging the body with ice cold water or vinegar & water, is perhaps the safest and best. The waporation which ensues, causes a more gradual abstraction of Caloric, and its effects are not so transient as those arising from suddenly plunging the patient in water. With the same view when the excitement is very great, may be given enemata of water either

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cold or tepid. We are cautioned however against a too excessive employment of this measure, as by it the excitement may be brought too low. In this stage of the fever are also used the Refrigerants. The nitrate of Potash is most commonly employed, which combined with Emetic Tartar & Calomel constitute the well known nitrous powder. When we have diminished the force and violence of the disease by the foregoing measures, we must resort to the diaphoretics. Our intention however is not actually to sweat the patient, for to the hypothesis that a sweat by any means induced contributed to the solution of fevers, may be attributed much erroneous practice. The critical sweats which take place in fevers, may be regarded in most instances as the consequence not the cause of recovery. But the medicines here indicated, are supposed to have specific powers, independently of their effect in exciting

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perspiration. Of these the Emetic Tartar is now most usually employed. Some difference of opinion exists, with regard to the mode of administering this medicine. It was the opinion of Cullen, that its remedial powers depended upon an impression being made on the stomach by nausea or vomiting But it is stated by Fordyce, and the propriety of the practice is much insisted on by Dr Chapman, that administered in this way, much of its efficacy is lost. We direct therefore that it should be given, in as large doses as the stomach will bear without its creating nausea or vomiting, the Antimonials being here considered as specific in their action, in the same way that Mercury, bark or Arsenic are, in the Cure of other diseases Other articles are also used with the same views the principal of which is Ipecacuanha in combination with Opium. But we are taught that though their sensible effects are greater their salutary powers

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are less, & a great objection to Opium is founded, on its acknowledged powers of lessening the secretory functions, which in fevers are usually in too inactive a condition. If the Antimonials should from any circumstances prove inadmissible, we may use the draught of Rivenus, or the Neutral Mixture When vascular action is subdued should any typhoid tendency be manifest, the vesicating applications are indicated. These are to be applied to the extremeties, as the wrist, ancles or inside of the thighs. Some question as to their utility, still exists among practitioners. This difference may be attributed probably, to the different states of the systems in which they are employed. We should always wait for the force and violence of the disease to be reduced by previous measures, before we resort to them. Many Practitioners are in the habit of using the Cinchona Bark, in this stage of the fever. Cullen observes, that after

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Considerable remissions have appeared, it may be given to prevent the return of the exacerbations, on the same footing that it is given in Intermittents; and further that it may be employed in the advanced stages of Continued Fever, when all suspicions of an inflammatory state is removed, and a general debility prevails. There are other circumstances however, which should influence us in the employment of this article, it is not to be given unless the tongue is clean and the skin in a moist or perspirable condition. There are other Tonics which are perhaps used with better effects, these are the Angustura, Serpentaria, Eupatorium Pyloxum &c. In southern climates where the hepatic apparatus is always more or less implicated, or where the disease proves intractable to the other remedies, the aid of mercury is demanded. As well to restore the healthy secretions of the stomach & liver, as to

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subdue the remains of the fever by its setting up its own peculiar action, is this remedy indicated.

There are yet other considerations in the treatment of this disease, of too much importance to be passed over. The strict antiphlogistic regimen that is demanded renders it necessary that all additional sources of excitement should be guarded against. All exercise of the mind or body is to be avoided. The patient should be placed in a large & airy chamber, the light excluded and no more attendants allowed than are absolutely necessary, and his bed clothes & linen should be frequently changed. In the anorexia which almost always exists, nature points out the course to be adopted with regard to aliment. It should consist for the most part of acidulated drinks, which should be freely allowed, so as not however to oppress the stomach and create vomiting. These are

also palliatives of the painful sensations of thirst, a constant attendant of this fever. As thirst besides rendering the patient extremely uncomfortable is a powerful stimulus, it should as much as possible be diminished. In many instances it arises from a foul condition of the stomach, or a vitiated state of its mucous coat. In the first case an Emetic is indicated in the latter we should correct the state of the mucous tissue with minute doses of Calomel, or some one of the Antimonials Nausea is another affection, which is perhaps the most distressing in this disease. It may be owing to the presence of bile in the stomach, or to mere irritability of that organ. Should it depend on the former of these causes, which may be known by a bitter taste in the mouth with now and then bilious vomitings, it may be relieved by cleansing the stomach with gentle Emetics, as warm water, chamomile tea &c. When it arises from

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irritation, we have a variety of remedies. Among them may be enumerated, the Effervescent draught, Seltzer water, Lime water & milk, the sugar of Lead with a small proportion of Opium, Most of the essential oils, Pepper vinegar, an old opium pill or anodyne enemata. External applications are also to be made, as a Pediluvium of warm water & mustard, Sinapisms, fomentations or finally a blister over the abdomen. Such are the remedies we bring into requisition in combatting this disease. Should they prove ineffectual, and the case degenerates into a typhoid fever, the same indications that are presented for the treatment of genuine Typhus, are here equally applicable As the Bilious Remittent Fever prevails in my native state; & in those forms I have been accustomed to witness, we have too frequently to lament the inutility of our remedies. Carolina yet mourns the loss of many of her most valued citizens, who afford melancholy instances of its fatal power, triumphing over all the obstacles, which art could suggest to arrest its progress.